

**Professional Record
of
ROBERT A. KRIEGER**

1998

I. PERSONAL DATA

A. Professional Registration

California, Arizona, Nevada, Oregon, Washington

B. Professional Affiliations

1. Member - American Society of Civil Engineers, National Organization and Los Angeles Section
2. Member - National Society of Professional Engineers and California Society of Professional Engineers. Past President of Riverside-San Bernardino Chapter of the latter.
19. Member - Consulting Engineers and Land Surveyors of California
20. Member - American Consulting Engineers Council
3. Member - American Water Works Association, National Organization and California Section
4. Member - Water Environment Federation and California Water Environment Association
5. Member - National Groundwater Association
6. Member - American Public Works Association
7. Member - United States Committee on Irrigation, Drainage, and Flood Control
8. Member - Western Coalition of Arid States
10. Member - California Groundwater Association
11. Member - Groundwater Association of California
12. Member - WaterReuse Association of California
14. Member - Southern California Water Utilities Association
16. Chariman - Southern California Water Committee
18. Associate Member - Association of California Water Agencies

C. Formal Education

1. Bachelor of Science in Engineering (Civil Option)
University of California, Berkeley (1962)
2. Graduate Courses:
 - a. Advanced Sanitary Engineering Design - Water Treatment
University of Southern California, Los Angeles (1965)
 - b. Advanced Sanitary Engineering Design - Sewage Treatment
University of Southern California, Los Angeles (1967)
 - c. Biological Unit Processes
California State Polytechnic University, Pomona (1974)

D. Continuing Education and Professional Development

1. Economics
University of California Extension, Riverside (1958)
2. Water Resources Engineering
University of California Extension, Riverside (1965)
3. Street and Highway Drainage
University of California Extension, Riverside (1966)
4. Hydrologic Design Methods
University of California Extension, Riverside (1966)
5. Legal Aspects of Water Resource Allocation
University of California Extension, San Francisco (1968)
6. Ground Water Pollution
University of California Extension, San Francisco (1973)
7. Water Supply Wells and Pumps
University of California Extension, Davis (1981)
8. Hydraulics of Flood Works
California State University, Long Beach (1983)
9. California Water Law
University of California, Riverside (1988 & 1995)

II. EXPERIENCE RECORD

A. Testimony as Expert Witness

1. California Public Utilities Commission
City of Riverside vs. Southwest Water Company on behalf of City of Riverside:
Domestic Water System Valuation
2. State Water Resources Control Board
Elmore vs. Imperial Irrigation District on behalf of Elmore: Water Use and
Irrigation Efficiency (Board Decision 1600)
3. Superior Courts of Riverside and San Bernardino Counties
 - a. Barstow vs. Adelanto on behalf of Jess Ranch and Lenwood Ranch:
Mojave River Ground Water Adjudication (Water Rights)
 - b. Clark vs. City of Riverside on behalf of City of Riverside: Irrigation
Reservoir Operation (Storm Release Damage)
 - c. Coachella Valley Water District vs. Southern California Water Company
on behalf of Coachella Valley Water District: Domestic Water System
Valuation
 - d. City of Colton vs. City of Grand Terrace on behalf of City of Colton:
Wastewater Treatment Plant Capacity Allocation
 - e. Culligan vs. City of San Bernardino Redevelopment Agency on behalf of
Culligan: Water Quality, Rainfall Runoff, Flooding Damage
 - f. Davis vs. Santa Fe on behalf of Davis: Rainfall Runoff and Flooding
Damage
 - g. Johnson vs. City of Riverside on behalf of City of Riverside: Rainfall
Runoff and Flooding Damage
 - h. Markoulis vs. Cook on behalf of Markoulis: Recreation Lake Grading
Deficiencies
 - i. Myers vs. Four Point Contractors on behalf of Four Point Contractors:
Storm Drain Construction Deficiencies
 - j. Nastronero vs. Ashley on behalf of Ashley: Subdivision Site Grading
Deficiencies
 - k. Opatowsky vs. City of Riverside on behalf of City of Riverside:
Irrigation Reservoir Operation (Storm Release Damage)
 - l. Smith vs. Domenigoni on behalf of Smith: Rainfall Runoff and Flooding
Damage
 - m. Tamarisk Country Club vs. Coachella Valley Water District on behalf of
Coachella Valley Water District: Water Well Pumping Unit Failure

- n. Wiseman vs. Pegg on behalf of Wiseman: Site and Building Construction Deficiencies
- o. Goldmann vs. Knox on behalf of Knox: Storm Water Diversion and Flooding Damages as Well as Site Grading Deficiencies
- p. Caltrans vs. DeMare on behalf of DeMare: Storm Water Discharges and Associated Property Flooding Damages
- q. Sungate County Owners Association vs. Sungate County on behalf of Sungate County: Development Construction Deficiencies

B. Work History

July 1971 to Present

President, Krieger & Stewart, Incorporated, 3602 University Avenue, Riverside, California with representative assignments including:

Consultant to numerous water and wastewater agencies and districts, including cities and counties as well as to various private water and wastewater companies.

Service as expert witness in litigated matters involving ground water, surface water, irrigation, drainage, flooding, and construction.

Investigation of alternative aqueduct systems for a State Water Project Contractor (110 CFS capacity, \$100 million estimated construction cost).

Investigation of the effect of a flood control project on recharge of surface water runoff (18,000 CFS peak discharge) in a natural streambed and downstream flood plain.

Investigation of potential flooding which would result from sudden and complete failure of a concrete arch dam as required by State mandated program (250,000 CFS peak discharge).

Preparation of engineering appraisals of public utility water systems based on depreciated reproduction cost, rate base, comparable sales and capitalized earnings (up to \$3 million value).

Preparation of water and wastewater General Plans for communities with projected populations to 200,000.

Preparation of Environmental Impact Reports for water and wastewater projects (up to \$12 million).

Preparation of contract documents for and administration and management of construction of water system projects including extraction wells (to 24" diameter and to 2,000' deep), pumping plants (to 2400 hp), gravity and pressure pipelines (to 78" diameter), storage tanks (to 12 MG), and ancillary facilities such as buildings and roads.

Determination of Warren Groundwater Basin safe-(perennial) yield and advice to court on same.

Determination and verifications of water rights for Jess Ranch and Lenwood Ranch in Mojave River groundwater adjudication.

Participation in various groundwater projects especially in the Coachella Valley, the Indian Wells Valley, the Mojave and Santa Ana River systems, and the San Geronio Pass.

Participation in Imperial Irrigation District/Metropolitan Water District Water Conservation Program (conservation of 110,000 acre feet of water/year through specific water conservation projects) as a member of Water Conservation Measurement Committee.

February 1962 to July 1971

Engineer to Senior Engineer, Albert A. Webb Associates, Riverside, California with representative assignments as follows:

Preparation of water and wastewater feasibility reports including studies on population, water requirements, sewage contributions, facilities design, construction costs, and project financing.

Preparation of inventories and appraisals of water and sewage systems to 10,000 connections. Preparation of reports on water resources (entitlement, production, quality, supply, use, reuse, and disposal).

Design of facilities, preparation of Contract Documents (specifications), and supervision of construction inspection for water and wastewater systems, including source plants, pumping plants, transmission facilities, distribution and collection systems, storage facilities, and disposal facilities.

Participation in investigation, design, and inspection of water and wastewater facilities including aqueducts consisting of pipelines and open channels.

June 1958 to January 1961

Engineering Aide, Matich Corporation, Colton, California

Participation in cost comparisons of alternative methods for specific project construction. Preparation of time and motion studies related to same. Testing of construction materials and participation in construction surveying. Participation in project cost estimating.

May 1957 to May 1958

Technician, Hugh M. Gallaher, Incorporated, Riverside, California.

Part-time work while student at University of California, Riverside. Work included soils investigations including borings, sampling, density determinations, laboratory tests, concrete sampling and testing, and related analyses.

January 1956 to April 1957

Technician, Albert A. Webb Associates, Riverside, California.

Part-time work while student at University of California, Riverside. Work included preliminary soils investigations including borings, sampling, density determinations, laboratory tests, concrete sampling and testing, and related analyses.